

## ETHANOL PIPELINE TRANSPORTATION QUESTIONS

|                                |              |  |  |
|--------------------------------|--------------|--|--|
| <b>Name of Operator:</b>       |              |  |  |
| <b>OP ID No.</b>               |              | <b>Unit ID No.</b>                     |  |
| <b>HQ Address:</b>             |              | <b>System/Unit Name &amp; Address:</b> |  |
|                                |              |  |  |
| <b>PHMSA Representative(s)</b> |              | <b>Phone No.:</b>                      |  |
| <b>Date(s) of interview</b>    |              | <b>Fax No.:</b>                        |  |
| <b>Activity #:</b>             |              | <b>Emergency Phone No.:</b>            |  |
| <b>Persons Interviewed</b>     | <b>Title</b> | <b>Phone No.</b>                       |  |
|                                |              |  |  |
|                                |              |  |  |
|                                |              |  |  |

**Unit Description (only portion transporting ethanol):**

**Summary of operator's ethanol transportation plan:**

**Actual dates of ethanol transport and any problems encountered during ethanol transportation:**

## 49 CFR PART 194

| Emergency Response Plans |   | Y | N | N/A | N/C |
|--------------------------|---|---|---|-----|-----|
| .7<br>.101<br>.121       | Has a revised response plan been submitted?   |   |   |     |     |
|                          | Has response to ethanol vapor been addressed?   |   |   |     |     |
|                          | <b>Date Revised FRP was submitted</b>   |   |   |     |     |
| .103                     | Has the operator's statement of significant and substantial harm been reviewed and modified, as necessary, to account for the new commodity transported?    |   |   |     |     |
|                          | <b>Describe statement modifications</b>   |   |   |     |     |
| .107                     | Have procedures and resources needed to respond to a worst case discharge been modified to accommodate the new commodity?                                   |   |   |     |     |
|                          | <b>Briefly describe procedural changes</b>  |   |   |     |     |
|                          | Do procedural changes described above address response to an ethanol fire?  |   |   |     |     |
|                          | Has the fire fighting medium changed from that presently used?  |   |   |     |     |
|                          | Are sufficient quantities of compatible fire fighting medium and equipment readily available?   |   |   |     |     |
|                          | Has the operator confirmed the compatibility and quantity of booms and other equipment required to contain spills?  |   |   |     |     |
| .113(b)(6)               | Have response zone appendices been modified to reflect the new commodity?   |   |   |     |     |
| .115                     | Have changes been made to arrangements for response resources to accommodate the different needs of a ethanol spill?  |   |   |     |     |
|                          | Has this included addressing the need for appropriate foams to fight ethanol fires?   |   |   |     |     |
| .117(a)(3)               | Has the training program been revised to assure that personnel engaged in response activities understand the changes needed to respond to an ethanol spill? |   |   |     |     |
|                          | Has training been conducted?  |   |   |     |     |

**Comments:**

## 49 CFR PART 195

| General / Emergency Response Plans |  | Y | N | N/A | N/C |
|------------------------------------|--|---|---|-----|-----|
| .4                                 | How has the operator determined if the ethanol is chemically compatible with the pipeline and components?  |   |   |     |     |
|                                    | <b>Describe here. If study was performed obtain copy of Summary</b>  |   |   |     |     |
| .5                                 | If the pipeline is being converted from service not subject to Part 195, has a conversion plan been prepared?                                    |   |   |     |     |
| .8                                 | Is any portion of the pipeline constructed of materials other than steel?  |   |   |     |     |
|                                    | Has the Administrator been notified of the intention to transport a new hazardous liquid? ( <b>Inspector should review notification letter</b> ) |   |   |     |     |

| Reporting |   | Y | N | N/A | N/C |
|-----------|---|---|---|-----|-----|
| .55(a)(6) | Have procedures for identifying safety-related conditions been reviewed to determine if changes are needed to reflect potentially different situations that could result in an imminent hazard? |   |   |     |     |

**Comments:**

| Design          |   | Y | N | N/A | N/C |
|-----------------|---|---|---|-----|-----|
| .101            | <b>Has the operator determined the following:</b><br>- That a metallic component other than pipe is qualified for service?  |   |   |     |     |
| .116(c)         | - That each part of a valve in contact with the commodity is compatible with that commodity?  |   |   |     |     |
| .118(c)<br>.126 | - That any other soft goods incorporated into the pipeline are suitable for service under conditions of ethanol transport?<br><i>Examples include control fittings, pig signaling devices, pump components, or any other fitting incorporating elastomers or other materials whose wetted surface could be affected by the product.</i> |   |   |     |     |

| Construction |  | Y | N | N/A | N/C |
|--------------|--|---|---|-----|-----|
| .206(c)      | Are new mainline valves being added or existing mainline valves being relocated due to the potentially different threat(s) of damage or pollution from ethanol?                                  |   |   |     |     |
| .262(e)      | Has the pump station fire protection system been modified for ethanol emergencies?   |   |   |     |     |
|              | Are foam systems appropriate for ethanol?  |   |   |     |     |
| .266         | Were appropriate construction records created and maintained for a new pipeline?<br>(Inspector should review construction documents and note pipeline modifications inconsistent with Part 195 ) |   |   |     |     |

**Comments:**

| Pressure Testing |  | Y | N | N/A | N/C |
|------------------|--|---|---|-----|-----|
| .302             | Has the pipeline been pressure tested as required?                                   |   |   |     |     |
| .304             | Was the pipeline pressure tested to the appropriate pressure for the required times? |   |   |     |     |
| .305             | Were pipeline fittings and components pressure tested as required?                   |   |   |     |     |
| .306             | Was the appropriate test medium used?  |   |   |     |     |
| .310             | Are pressure testing records complete?   |   |   |     |     |
|                  | Do they demonstrate compliance with requirements?                                    |   |   |     |     |

**Comments:**

| Operation and Maintenance |  | Y | N | N/A | N/C |
|---------------------------|--|---|---|-----|-----|
| .402                      | Has the operator's manual for operations, maintenance, and emergency procedures been reviewed and revised, as needed, to incorporate changes needed for ethanol transport? |   |   |     |     |
| .402(c)(11)               | Has the operator considered the specific flammable range and volatility of the ethanol in repair procedures and "safe work" procedures?                                    |   |   |     |     |

| Operation and Maintenance |   | Y | N | N/A | N/C |
|---------------------------|---|---|---|-----|-----|
| .403(a)                   | Has the operator revised, as needed, its training for emergency response personnel to reflect the different conditions and response activities appropriate for ethanol emergencies?       |   |   |     |     |
|                           | Have emergency response personnel been trained in these areas?  |   |   |     |     |
| .403(c)                   | Has the operator verified that its supervisors have a thorough knowledge of any changes to the emergency response procedures for which they are responsible?                              |   |   |     |     |
| .404                      | Are appropriate maps and records available?   |   |   |     |     |
| .406                      | Has the maximum operating pressure been established as required?  |   |   |     |     |
| .408                      | Is a communication system available to provide for transmission of information necessary for safe operation?  |   |   |     |     |
| .410(a)(1)<br>(i)         | Have line markers been replaced/modified to reflect the transport of ethanol?   |   |   |     |     |
| .422(b)                   | Were all replacement pipe, fittings and valves designed and constructed per Part 195?   |   |   |     |     |
| .428                      | Is overpressure protection provided as required?  |   |   |     |     |
| .430                      | Has the operator assured that firefighting equipment at pump stations and breakout tank areas is adequate for ethanol service? (In conjunction with .262(e) in the construction section.) |   |   |     |     |
| .430                      | Has the operator revised its breakout tank inspection procedures to address the possibility of stress corrosion cracking?   |   |   |     |     |
| .436                      | Has the operator considered whether additional security provisions are necessary?   |   |   |     |     |
| .438                      | Have no-smoking/open flame areas been reviewed to determine if additional areas must be controlled due to the potential for ethanol vapors?   |   |   |     |     |
| .440                      | Has the operator's public awareness program been revised to address transport of ethanol?   |   |   |     |     |
|                           | Has public outreach taken place?  |   |   |     |     |
|                           | Have affected municipalities been informed of potential new hazards?  |   |   |     |     |
| .444                      | Has the operator determined that ethanol will not affect the functionality and reliability of any CPM leak detection system?  |   |   |     |     |

**Comments:**

| Integrity Management |  | Y | N | N/A | N/C |
|----------------------|--|---|---|-----|-----|
| .452(a)              | Has the operator reviewed its analysis of pipeline segments that could affect high consequence areas to determine if changes are needed due to the different nature of ethanol (e.g., viscosity, miscibility in water)?                        |   |   |     |     |
|                      | Has the operator analyzed potential affects on HCAs due to vapor release considering the volatility of ethanol?  |   |   |     |     |
| .452(e)(1)<br>(iv)   | Has the operator considered whether a change in product transported requires a change in its assessment schedule?  |   |   |     |     |
| .452(g)              | Has the operator revised its information and risk analyses to reflect transport of ethanol?  |   |   |     |     |
|                      | Has the operator considered new potential new threats (e.g., SCC, internal corrosion), effect of ethanol on the integrity of pipeline components, and potential changes in consequences of a release (e.g., volatility, miscibility in water)? |   |   |     |     |
| .452(h)              | Has the operator reviewed its criteria for repairing defects identified during IM assessments to determine whether changes are needed to reflect potential effects of ethanol (e.g., requirements to address incipient SCC)?                   |   |   |     |     |
| .452(i)              | Has the operator considered the need for additional preventive and mitigative measures to address new/increased threats or consequences posed by ethanol?  |   |   |     |     |
| .452(i)(3)           | Has the operator determined that its leak detection is adequate to protect high consequence areas considering the nature and different consequences of an ethanol release?   |   |   |     |     |

| Integrity Management |   | Y | N | N/A | N/C |
|----------------------|---|---|---|-----|-----|
| .452(i)(4)           | Has the operator considered whether additional EFRDs are needed to protect high consequence areas given ethanol miscibility in water?           |   |   |     |     |
| .452(j)              | Has the operator considered whether new/additional assessment methods are needed or whether IM assessments should be conducted more frequently? |   |   |     |     |
| .452(k)              | Has the operator considered adding additional performance measures to its IM program to measure potential effects of ethanol?                   |   |   |     |     |

**Comments:**

| Operator Qualification |  | Y | N | N/A | N/C |
|------------------------|--|---|---|-----|-----|
| .501 & .505(a)         | Has the operator identified whether transport of ethanol introduces any new covered tasks?   |   |   |     |     |
| .505(b)                | Has the operator qualified its personnel for any new covered tasks?  |   |   |     |     |
|                        | Has the operator determined whether training or qualification for any existing covered tasks must be revised to account for knowledge unique to transporting or working with ethanol releases? |   |   |     |     |
|                        | Has the operator conducted necessary qualification evaluations for any existing covered tasks for which qualification criteria must change?  |   |   |     |     |
| .505(f)                | Has the operator communicated to individuals performing covered tasks any changes introduced by transport of ethanol?  |   |   |     |     |

**Comments:**

| Cathodic Protection |   | Y | N | N/A | N/C |
|---------------------|---|---|---|-----|-----|
| .579                | Has the operator examined the corrosive effect of ethanol and taken adequate steps to mitigate internal corrosion?  |   |   |     |     |
|                     | Is the operator using inhibitors and coupons or other monitoring, as necessary, to adequately protect and evaluate the pipeline against internal corrosion? |   |   |     |     |
|                     | Is the operator analyzing product samples to help determine the inhibitor and cleaning pig requirements?  |   |   |     |     |
| .579(c)             | How has the operator revised its procedures for inspecting the internal surface of removed pipe to assure the capability to detect SCC?                     |   |   |     |     |

**Comments:**